



ऑयल इंडिया लिमिटेड
(भारत सरकार का उद्योग) पंजीकृत कार्यालय: दुर्गापुर, असम
Oil India Limited
(A Government of India Enterprise) Registered Office: Dujapur, Assam

Oil India Limited (RP)
2-A. District Shopping Centre
Saraswati Nagar, Basni
Jodhpur-342005,
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FORWARDING LETTER

Tender No. : SJI7551P16 **Dated :** 17.06.2015

Tender Fee : INR 1,000.00

Bid Security Amount : INR 28,000.00

Bid Bond Validity : Bid Bond should be valid up to 18.06.2016.
(Bid bond format has been changed. Please submit bid bond as per revised format. Refer: MM/RP/GLOBAL/E-01/2005)

Bid Validity : Bid should be valid for 120 days from bid closing date.

Bidding Type : SINGLE STAGE COMPOSITE BID SYSTEM

Bid Closing on : As mentioned in the e-portal

Bid Opening on : -do-

Performance Security : Applicable (@10% of the PO value)

Integrity Pact : Not Applicable

OIL, Rajasthan Project invites Bids for
SUPPLY,TRANSPORATION,LOADING.UNLOADING, INSTALLATION, TESTING & COMMISSIONING OF 125 KVA DIESEL ENGINE DRIVEN GENERATING SETS WITH ACOUSTIC ENCLOSURES & AMF PANELS AT DND-GPC, DANDEWALA, DIST. JAISALMER through its e-Procurement site under **SINGLE STAGE COMPOSITE BID SYSTEM**. The bidding documents and other terms and conditions are available at Booklet No. MM/RP/GLOBAL/E-01/2005 for E-Procurement (Both ICB & LCB Tenders). The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area -> Tender Documents

The general details of tender can be viewed by opening the RFx [Tender] under RFx and Auctions. The details of items tendered can be found in the Item Data and details uploaded under **Technical RFX**.

The tender will be governed by:

- ôGeneral Terms & Conditionsô for e-Procurement as per Booklet No. MM/RP/GLOBAL/E-01/2005 for E-Procurement.
- Technical specifications and Quantity, **BRC/BEC** and any other notes as per **Annexure – IA**.

- c) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.
- d) In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.
- e) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited).
- f) Bidder are advised to fill up the Technical bid check list (**Annexure EEE**) and Response sheet (**Annexure FFF**) & Bank Details (**Annexure GGG**) as per given format in Technical RFx -> External Area - > Tender Documents. The above filled up document to be uploaded in the **Technical RFx** Response.
- g) All corrigenda, addenda, amendments, time extension, clarifications etc. To the tender will be hoisted on OIL's website (www.oil-india.com) and in the e-portal (<https://etenders.srm.oilindia.in/irj/portal>) only and no separate notification shall be issued in the press. Prospective bidders are requested to regularly visit the website and e-portal to keep themselves updated.

Special Note:

1.0 General Qualification Criteria:

In addition to the general BRC/BEC, following criteria on Bidders' Experience and their financial capabilities shall be considered (**documentary evidence to be provided along with the bid in Technical RFx -> External Area - > Tender Documents**) as on the Bid Closing Date:

- a) Bidder should have experience of successfully executing similar order of INR **8.4 Lakhs** during last 3 years.

Definition of Similar Order: Supply, installation, commissioning and testing of Diesel Engine driven generating sets of capacity 125 KVA or above along with the AMF Panels and accessories

- b) Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than **INR 28.00 Lakhs**.

2.0 Application showing full address/email address with Tender Fee (Non-refundable) of INR 1,000.00 in favour of OIL INDIA LIMITED and payable at Jodhpur is to be submitted to Chief Manager (M&C), Oil India Limited, Rajasthan Project, 2A, Saraswati Nagar, District Shopping Centre, Basni, Jodhpur-342005, Rajasthan. Application shall be accepted only upto **one week prior to Bid Closing date (or as amended in e-portal). The envelope containing the application for participation should clearly indicate "REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO. SJI7551P16" for easy identification and timely issue of user ID and password. On receipt of requisite tender fee, **USER_ID** and initial **PASSWORD** will be communicated to the bidder (through e-mail)**

and will be allowed to participate in the tender through OIL's e- Procurement portal. No physical tender documents will be provided. Details of NIT can be viewed using "Guest Login" provided in the e-Procurement portal. The link to e-Procurement portal has also been provided through OIL's web site www.oil-india.com.

NOTE:

a) Tender Fee may also be paid online upto one week prior to the bid closing date (or as amended in e-portal).

NOTE: PSUs and SSI units are provided USER_ID and initial PASSWORD Free of Cost (as per govt guidelines), however they have to apply to OIL's designated office to issue USER_ID and initial PASSWORD before the last date of apply.

3.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following document/materials which are to be submitted manually in sealed envelope super scribed with **Tender no.** and **Due date** to **Chief Manager (M&C), Oil India Limited, Rajasthan Project, 2A, Saraswati Nagar, District Shopping Centre, Basni, Jodhpur-342005, Rajasthan** on or before the Bid Closing Date and Time mentioned in the Tender.

- a) **Original Bid Security**
- b) **Detailed Catalogue (if any)**
- c) **Any other document required to be submitted in original as per tender requirement**

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in duplicate.

4.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.

5.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time failing which the offer shall be rejected.

6.0 Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.

7.0 The tender shall be governed by the Bid Rejection & Bid Evaluation Criteria given in enclosed **Annexure-IA**. However, if any of the **Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (as per Annexure-IA)** contradict the **Clauses of the tender and / or óGeneral Terms & Conditionsô** as per Booklet No. MM/RP/GLOBAL/E-01/2005 for E-Procurement (Both ICB & LCB Tenders) **elsewhere, those in the BEC / BRC shall prevail.**

7.1 The following points are deemed as "non-negotiable" and offer shall be rejected straightaway without seeking clarification in case of the following:

- i. **Validity of bid shorter than validity indicated in the tender.**
- ii. **Original Bid Security not received within the stipulated date and time mentioned in the tender.**
- iii. **Bid security with (a) Validity shorter than the validity indicated in tender and/or (b) Bid security amount lesser than the amount indicated in the tender.**

8.0 Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.

9.0 All the Bids must be Digitally Signed using eClass 36 digital certificate (e-commerce application) with organisation name as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India.

10.0 BIDDERS ARE REQUIRED TO QUOTE WITH MINIMUM VALIDITY OF 120 DAYS FROM THE BID CLOSING DATE AS PER NIT REQUIREMENT. BIDS WITH LESSER VALIDITY SHALL BE REJECTED.

11.0 Performance Security: Successful bidder will be required to furnish a Performance Security @10% of the order value. For details about performance security and exemption for submission of the same, please refer Clause No. 10.0 of General Terms and Conditions vide MM/RP/GLOBAL/E-01/2005 for E-Procurement ICB Tenders. The Performance Security must be valid for a period of 12 months from the date of commissioning of the equipment at site or 18 months from the date of dispatch/shipment whichever is earlier. The bidder should confirm submission of the requisite Performance security (in the event of order) in their offer itself, failing which the offer will be rejected.

12.0 You are required to submit original Bid Security at the office of Chief Manager (M&C), Oil India Limited, Rajasthan Project, 02-A, Saraswati Nagar, District Shopping Centre, Basni, Jodhpur-342005, Rajasthan, India on or before the Bid Closing Date and Time of the technical bid. The bid security should be of amount INR 28,000.00 in conformity with OIL's prescribed format as Bank Guarantee enclosed with the booklet MM/RP/GLOBAL/E-01/2005 or a Bank Draft/Cashier cheque in favour of OIL INDIA LIMITED and payable at Jodhpur, Rajasthan (India).

13.0 For details about Bid Security and the eligibility for exemption of bid security, please refer to Clause 9.0 under Section A of General Terms and conditions for Global Tender vide booklet MM/RP/GLOBAL/E-01/2005. Also please refer Annexure-VII vide MM/RP/GLOBAL/E-01/2005 to obtain the format for Bank Guarantee. A scanned copy of the bid security should be uploaded alongwith the offer for our information. If the bid security in ORIGINAL of above mentioned amount is not received within bid closing date and time, the bid submitted through electronic form will be rejected without any further consideration. The bidders who are exempted from submitting Bid Security should attach documentary evidence alongwith their technical bid. The Bank Guarantee/LC towards Bid Security shall remain valid for 180 days more than the Bid Validity i.e. 300 days validity is required from the date of Bid opening.

14.0 Benefits to Micro & Small Enterprises (MSEs) as per prevailing Govt guidelines as applicable on B.C date shall be given. MSEs who are interested in availing the benefits will upload with their offer proof of their being MSE registered for the item tendered. The MSE are also required to upload scanned copies of relevant documents indicating details of registration alongwith validity, name of the registering organization and details of the item, ownership etc., failing which, their offer may not be liable for consideration of benefits to MSEs.

NOTE: Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the NIT terms and conditions of NIT.

Yours Faithfully

**Sd-
(KRISHNA MOHAN KUMAR)
DY. MATERIALS MANAGER
FOR : CHIEF MANAGER (M&C)
FOR: EXECUTIVE DIRECTOR (RP)**



ऑयल इंडिया लिमिटेड
(भारत सरकार का उद्योग) पंजीकृत कार्यालय: दुर्लुवागंज, असम
Oil India Limited
(A Government of India Enterprise) Registered Office: Durluaganj, Assam

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ANNEXURE-IA

Tender No. & Date : SJI7551P16 Dated 17.06.2015

Bidding Type : Single Bid (Composite Bid)

Bid Closing on : As mentioned in e-portal

Bid Opening on : As mentioned in e-portal

OIL INDIA LIMITED (Rajasthan Project) invites Indigenous Bids for items detailed below:

TECHNICAL SPECIFICATIONS WITH QUANTITY:

SL. NO. MAT. CODE	MATERIAL DESCRIPTION	QUANTITY	UOM
10 0C000242	SUPPLY OF 125 KVA DIESEL ENGINE DRIVEN GENERATING SETS WITH ACOUSTIC ENCLOSURES & AMF PANELS	2	NO
20	INSTALLATION & COMMISSIONING OF DG SETS UNDER SL. NO. 10 ABOVE	1	AU

SUPPLY, INSTALLATION & COMMISSIONING OF 125 KVA DIESEL ENGINE DRIVEN GENERATING SETS WITH ACOUSTIC ENCLOSURES & AMF PANELS:

Make/Model : Engine : CUMMINS/ VOLVO/ KIRLOSKAR/ RUSTON or Equivalent.

Alternator : STAMFORD/ KIRLOSKAR/ CROMPTON GREAVES/ NGEF or Equivalent.

1.0 SCOPE OF WORK:

Supply, transportation, loading, unloading, erection, installation, testing and commissioning of two nos. 125 KVA, 415 volts, 3 phases, 50 Hz Diesel Engine driven Generating Sets with Acoustic enclosures and AMF panels at Oil India Limited's Gas Processing Plant, DND-GPC at Dandewala near Tanot in Jaisalmer district of Rajasthan.

2.0 GENERAL:

- i) The DG sets are to be installed & commissioned replacing 2 nos. 75 KVA DG sets in operation (without acoustic enclosures) & housed inside DG house at site. Bidder shall confirm about installation / commissioning at site in the Technical Bid.

The dimensions of the DG set house are enclosed for reference. (ANNEXURE ñ III)

- ii) Site Data :

a) Maximum ambient Temperature : 52 °C

- b) Minimum ambient Temperature : - 2 °C
 - c) Maximum Relative Humidity at 35° C : 50%
 - d) Maximum Altitude above mean sea level : 150 M
- iii) The scope also includes but not limited to civil works for DG set foundations & fabrication works for exhaust ducting, supply of power cables, earthing materials (4 nos. earth electrodes, earthing conductor / strips, earthing plate), glass wool, Aluminum claddings and any other material / works complete as required for installation, testing and commissioning of the DG sets complete.
- iv) The DG set shall be with acoustic enclosures comprising of diesel engine coupled to 4-pole alternator with self regulated brushless excitation system on a single frame with integrated DG set monitoring, control system including AMF panel.
- v) All equipment shall be of the class most suitable for working under the conditions specified and shall withstand the atmospheric conditions without deterioration.
- vi) DG sets shall be put into successful operation in co-ordination with existing LT Panel(s).

3.0 ENGINE

- i) The engine shall be a four stroke, turbo charged, after cooled, having counter clockwise rotation diesel engine, rated for continuous power and capable of developing a net minimum BHP of 158 at 1500 rpm at the site conditions.
- ii) The engine should comprise the following standard accessories such as
 - Flywheel
 - Fuel and lubricating oil filter
 - Heavy duty air intake filters.
 - Lubricating oil pressure gauge
 - Tachometer
 - 24 volt DC electric starter (make : LUCAS TVS / DELCO)
 - 24 volt DC Battery Charging Alternator (make : LUCAS TVS / DELCO)
 - Batteries : 2 nos. 12 volts, 180 AH capacity Lead acid batteries (make : Exide / AMCO / STANDARD) with battery leads.
 - Heavy Duty Radiator.
 - Fuel tank of capacity to run the genset for continuous 16 hours (minimum) on full load.
 - Guard for all moving parts of the engine such as W/pump belt, charging alternator belt, radiator fan etc.
 - Residential type Exhaust silencer with spark arrestor (muffler).
 - **ENGINE CONTROL PANEL:** The engine control panel shall be installed on the body of the enclosure, operable from outside.
It shall comprise of the following but not limited to:
 - a) Engine control switch for START, RUN, OFF.
 - b) Engine START switch / push button.
 - c) Emergency SHUT OFF / STOP switch / push button.
 - **ENGINE MONITORING PANEL:** It shall be installed at the body of the acoustic enclosure, covered by a suitable transparent toughened glass. The engine control panel shall comprise of the following but not limited to:
 - a) Digital / Analog tachometer, running hours counter & start counter
 - b) Digital / Analog Engine oil pressure & temperature gauges, Water temperature gauge
 - c) Battery charging current
 - Any items/points not included in the specifications but necessary for operation shall be stated by the bidder.

- Engine safety controls (High water temp, low lube oil pressure and over speed)
- iii) Fire extinguisher to be provided inside the canopy. The instrument panel with all gauges to be mounted on engine and should be visible from outside.

4.0 CONTROL SYSTEM:

Acoustically enclosed DG set along with AMF panels shall be supplied with fully integrated monitoring, metering and control system.

The engine should be with full range hydraulically assisted governor. The governor flyweights responding to load variations cause the governor control valve to move which in turn causes the fuel pump rack to move, either increasing or decreasing the amount of fuel to the engine as required.

The following parameters of engine & alternator shall be suitably incorporated & installed on engine control panel / engine monitoring panel or AMF panel with indicators, meters, annunciation/alarm & trip as per standard practice / design:

Engine Indicators	:	tachometer
	:	Running hours counter
	:	Starting attempts counter
	:	Lube Oil pressure low (for idle and for rated speed)
	:	Lube Oil temperature high
	:	Coolant temperature high
	:	Exhaust gas temperature high
	:	Low coolant level
	:	Over speed
Electrical Indications	:	Current
	:	Voltage
	:	Frequency
	:	Active power
	:	Power factor
	:	Battery voltage
Signal alarms	:	Control panel fault
	:	DC fault
	:	Failure to start
	:	Fuel level low
	:	Cooling Tower fan fault
	:	Water temperature high
	:	Battery low voltage
Controls and selectors	:	Operating mode selector switch (Start, Run, Off, Reset)
	:	Start / stop pushbuttons / switches
	:	Emergency STOP pushbutton / switch
	:	Fault reset pushbutton

4.1 SAFETY CONTROLS

- i) Low lube oil pressure trip
- ii) High water temperature trip
- iii) Over speed trip

4.2 OTHER FEATURES to be incorporated in the DG set :

- i) Vibration damper

- ii) Flywheel
- iii) Lifting eyes
- iv) Standard painting
- v) Suitable hand throttle control
- vi) Non sparking guards over transmission couplings
- vii) Non sparking guards over blower fan belt drive, water pump belt drive and charging alternator belt drive.

4.3 TOOL KIT FOR ENGINE

1 set of standard tool kit as per ANNEXURE-I (in the attached list) for carrying out normal maintenance of engine should be supplied in a conventional tool box.

5.0 ALTERNATOR:

The brushless alternator of 415 Volt, 125 KVA, 3 phase, 0.8 power factor (lag) rating when coupled to engine shall develop 125 KVA running at 1500 rpm under site conditions.

The brushless alternator shall compose of 3 phase AC exciter with rotating diodes, surge suppressor, main field windings and stator windings. PIV of exciter diodes must be minimum 6 times the maximum exciter armature operating voltage or 1200 V whichever is higher. All windings should be made from electrolytic grade copper of high purity.

Static voltage regulator with voltage adjuster potentiometer shall be external to the alternator & be housed in the AMF panel.

i) TECHNICAL SPECIFICATIONS OF ALTERNATOR:

Rated Output	: 125 KVA continuous rating at 0.8 PF at specified ambient
Rated Voltage	: 415 Volts
Phase	: 3 phase, 4 wire (neutral point has to be brought out to terminal box)
Type	: Brushless
Frequency / cycle	: 50 Hz
Rated power factor	: 0.8 lagging
No. of Poles	: 4
Class of insulation	: Class F / H
RPM	: 1500
Phase sequence	: UVW
Conforming to	: IS: 4722, 13364 with latest amendments.
Rating	: Continuous suitable for Motor loads.
Connection	: Y (Star)
Ambient	: 55°C max, -2°C min, RH 50%(max)
Alternator Enclosure Protection	: IP 23 (minimum)
Alternator Terminal Box Protection	: IP 23 (minimum)
Amplitude of vibration	: Should be as per IS-12075.
Excitation system	: Brushless, self excited, self

- regulated With solid state AVR
- Mounting : Foot mounted
- Permissible voltage variation : $\pm 5\%$ at rated speed, load
& power factor
- Permissible frequency variation : $\pm 3\%$ at rated load & power factor
- Frame size : Bidder to confirm
- Unbalanced current carrying capacity : 20 % of FLC continuously with none
of the phase currents exceeding the
rated current
- Short circuit current withstand capacity : shall not exceed 5 to 6 times FLC for 5 Secs
- ii) The alternator should be capable of sustaining a 10 % over load for one hour in any 12 hours operation.
 - iii) The alternator shall be designed to withstand a speed of 1.2 times the rated speed.
 - iv) Total harmonic distortion factor should be less than 3 % between phases at no load.
 - v) Bidder shall mention efficiency of the alternator at 25 %, 50 %, 80 % load at 0.8 pf.
 - vi) The alternator shall be with SPDP (screen protected drip proof), self ventilated, air cooled, rotating field, salient pole, brushless, machine with exciter and shall be rated continuous duty with temperature rise class F. The alternator should comply to standard IEC, VDE, BIS, ANSI.
 - vii) The alternator shall have a continuous rating of not less than the value specified under specific requirement at 0.8 pf (lag) and the voltage specified
 - viii) The alternator shall be capable of withstanding without mechanical damage an over speed of 20% for a period of 2 minutes.
 - ix) The alternator shall be capable of withstanding without damage / injury for three times the line current for 10 seconds.
 - x) Suitable arrangement with devices for measurement & display of alternator winding temperature shall be provided.
 - xi) The Alternator shall be suitable for 3-phase motor loads, single phase lighting & Air conditioner loads & UPS loads.
 - xii) All external nuts and bolts shall be of high tensile steel only.
 - xiii) Alternator shall be provided with anti-condensation space heater of adequate rating suitable for 240V, 50Hz, 1 ph A.C. supply and shall be wired upto a separate terminal box.
 - xiv) Two independent earth terminals on the frame complete with nuts, spring washer and plain washer shall be provided.
 - xv) Alternator shall be provided with suitable terminal box for terminating bus duct. Suitable arrangement shall be provided in the terminal box for formation of star point for alternator neutral connection and earthing (to be done at site by cables with copper conductors).
 - xvi) The alternator shall be capable to sustaining the unbalanced current between the phases up to minimum 20% of rated current.

- xvii) The radio interference should be within limit of the CISPR standard.
- xviii) Alternator should be dynamically balanced complete with rotor and shaft. Vibration limits as per IS.
- xix) NGR system (already installed & at service) shall be connected to the DG sets.

5.01 Other details for Alternators:

- i) Alternator stator winding terminals are to be connected to 4 nos. of suitably rated terminals inside the alternator terminal box.
- ii) The alternator terminal box should be suitable and should have sufficient space for terminating one no. 3½ core suitably sized power cable, 1100V grade PVC insulated and PVC sheathed, armoured, multi-strand copper cable. Cable gland(s) of suitable size(s) shall be fitted in the terminal box. Cable gland and entry hole shall also be provided in the TB for AVR cables as AVR shall be installed external to the alternator.
- iii) Neutral point of each alternator shall be connected to 2 (two) nos. earth electrodes by 2 nos. heavy duty PVC insulated, PVC sheathed, flexible, single core, IS approved copper cables of 50 sq mm size of repute make and of sufficient length (minimum 10 mtrs. for each DG set) for earth connection (to separate earth electrodes near the skid). The free ends of cables are to be terminated with heavy duty, tinned copper tubular lugs. Earth cable shall be protected to avoid any damage and to be run in galvanized, flexible MS conduit. Entry holes shall be provided in the alternator TB for entry of earthing cables.
- iv) 2 nos. of earth studs are to be provided on both sides of the alternator for body earthing.
- v) Lifting hooks are to be provided for lifting the alternator.

5.02 EXCITATION SYSTEM:

- i) The alternator shall be provided with a complete diode type brushless excitation system, capable of supplying the excitation current of the generator under all conditions of output from no load to full load and capable of maintaining voltage of the generator constant at one particular value.
- ii) The exciter shall have class-F insulation.
- iii) The excitation system shall comprise a shaft driven AC exciter with rotating rectifiers. The rectifiers shall have surge suppressor protection.
- iv) The alternator should be complete with solid state AVR. The exciter shall be fast response type and shall be designed to have a low time constant to minimize voltage transients under severe load changes. The excitation voltage response ratio shall be at least 0.8.
- v) The rated current of the main exciter shall be at least 10% more than the max. exciter current reqd. at full load and PF and it shall have a 40% overload capability for 10 seconds.
- vi) No external supply shall be required for controlling the excitation system during starting and normal running of the alternator.

5.03 AUTOMATIC VOLTAGE REGULATOR:

- i) An automatic high speed voltage regulator shall be provided complete with all accessories.
- ii) Voltage regulation and steady state modulation shall be within $\pm 1\%$ of the line voltage with manual voltage adjustment capability within $\pm 5\%$.

- iii) Necessary equipment for field suppression and surge protection shall be provided.
- iv) The response time of the exciter and the generator shall be properly matched to avoid hunting

6.0 SPECIFICATIONS OF CONTROL PANEL(s) / AMF PANEL(s):

Sheet steel clad, self supporting, floor mounting, cubicle type, dust and vermin proof generating set control panel made of 2 mm thick MS CRCA sheet and built upon rigid framework, having front and rear hinged doors with danger plate fitted on both sides, lifting lugs on top, ventilation louvers on both sides, bottom detachable gland plates, double earthing studs on two sides, complete with suitably sized zinc passivated hardware with heavy plain and spring washers. The panel doors should have neoprene rubber gasket. The panel should be designed and manufactured as per IS-8623. The panel enclosure will be as per IP54 except for the open part of cooling louvers at top and bottom of the panel sides. Suitable wire mesh should be provided on the inner side of the louvers to prevent entry of insects.

The metal surface of the panel should be given seven-tank anti corrosion treatment and then powder coated. Panel shall be supported on a frame of suitably sized rigid M.S. angle iron / M.S. channel frame work to have sufficient strength. The frame should be able to withstand the stress and vibration during transportation.

- i) The power cables from alternator shall be directly connected to the MCCBs (Make: Legrand / Merlin-Gerin / ABB / CG / Siemens) at AMF panels through suitably rated cable with cable terminations.

Outgoing cables from the AMF panel(s) shall be connected to the designated incomer of the existing changeover panel.

- ii) The salient points of the panel are as described below:
 - a) 1 No. Multifunctional meter of reputed make for measurement & display of voltage, current, frequency, kW, kWh
 - b) AVR of the alternator shall be mounted inside the control panel / AMF panel with vibration proof supports.
 - c) Battery charger with Voltmeters & ammeters
 - d) Audio-visual annunciation panel for any fault like LLOP, HWT, over speed, Low coolant, fuel level, electrical faults etc.
 - e) The control panel shall be fitted with a suitably rated MCCB as outgoing isolating & protection device. MCCB should trip on the following electrical faults:
 - Earth leakage
 - Over load & short circuit
 - Generator under voltage and overvoltage
 - Hooter / alarm shall be provided for audio warning in case of tripping of the Alternator and engine on fault.

Note: Panel shall be fitted with an electronic timer to prevent tripping due to LLOP during starting when lube oil pressure is low.

6.1 INSTRUMENTS AND SWITCHES: (Mounted on front hinged door)

- 1 No. Multifunctional meter for measurement & display of voltage, current, frequency, kW, kWh
- 1 No. Hour meter to indicate engine run hours
- 1 No. DC Ammeter for Battery Charger

- 1 No. DC Voltmeter for Battery Charger
- Battery Charger current selector switch(s) - ON / OFF, trickle / boost
- Indicating lamps
- Annunciation panel & hooter
- The panel should have push buttons for (i) Engine Stop (ii) Alarm Accept (iii) Alarm Reset (iv) Lamp Test.

Note ; Make for above instruments shall be AE / Rishabh / Kaycee / L&T / Kappa / Siemens / Schneider / GE

6.2 MAIN COMPONENTS: (Mounted Inside the Panel)

- 1 No. 250 Amps 4 pole MCCB, 30 kA breaking capacity (Make: Legrand / Merlin Gerin / ABB).
- Automatic Voltage Regulator.
- The MCCB shall have in-built adjustable overload & short circuit protection.
- DC shunt trip coil for external tripping. Front Drive kit with door interlocks facility to ensure that the door can be opened only when the MCCB is in the OFF position is to be provided.
- Overload should be adjustable from 50% to 100% and short circuit setting should be also adjustable from 1.5% to 5%. Make: Legrand / Merlin-Gerin.
- 1 No. CBCT along with Earth leakage relay for protection against earth leakage should be provided. Relay adjustable settings: 0.1 - 0.3- 1.0-3.0-10.0-30.0 Amps & 0.06-0.1-0.3-1.0- 5.0 sec in steps. During earth leakage relay should trip the MCCB through shunt trip coil.
- 1 No. KWH meter integrating, electronic type suitable for balanced and unbalanced loads, C.T. operated, 3 ph, 4 wire.
- CTs as required for measurement & protections.
- Auxiliary Relay / Contactor as required with some spare contacts.
- Battery Charging unit, with MCB & fuse protection
- Fuses and neutral links as required for control circuit, indicating system lamps, instruments, enclosure illumination and tripping circuit
- Terminal strips for terminating the control connection from the engine and AVR cable from Alternator.

6.3 WIRING / CABLE SCHEME:

- All cables and wires interconnecting alternator to control panel and from control panel to sockets are to be supplied by the bidder.
- Control panel wiring shall be done with 2.5 sq mm, flexible multi-stranded copper, 1100 V grade PVC insulated wires approved by ISI, Tariff Advisory Committee and Fire Insurance Authority. All wiring will have copper lugs & terminal blocks as required. Wiring for lighting circuit MCB, power outlet and wiring for CT will be done with 2.5 sq mm, flexible copper, 1100 V grade PVC insulated wires approved by ISI, TAC & FIA & have ring type lugs. Wires shall be colour coded, with numbered ferrules. (Make: Finolex / Havells / CCI / NICCO).
- Output from the Alternator terminal box should be connected to control panel with heavy duty 3 ½ core suitably sized, 1100 V grade, PVC insulated and PVC sheathed, armoured, stranded copper cable approved by IS. This cable is to be supplied & connected by the bidder.
- AVR shall also be wired from alternator to control panel by the supplier using heavy duty PVC insulated and PVC sheathed, 1100 V grade armoured, stranded, ISI approved copper cable of suitable size. Cable to be supplied by the bidder.

- Heavy duty Single Compression Cable Glands shall be provided at all cable entries for power and control cables. Cable Glands shall also be provided for the outgoing power cable. All cable glands to be supplied by the party.
- All power and control cable terminal ends will have suitable crimping lugs. All lugs supplied by the party.

Alternator to panel power cable, AVR cable and engine protection cable conduit shall be protected in their run from unit to control panel. Suitable provision shall be made for safe routing of output cable from panel to outside of the unit.

7.0 EARTHING:

- The earthing scheme with GI earth straps, copper cable (for Generator neutral), earth pit with electrodes (2 for neutral earth & 2 for body earth) for the unit should be as per IS-3043.
- Two nos. 50 x 5 mm GI straps shall be suitably fixed near the unit skid. Galvanisation thickness should be min. 85 micron and as per IS.
- Two heavy duty PVC insulated, PVC sheathed, stranded, single core copper cables of 50 sq. mm size shall be used dedicated for neutral earthing.
- Separate body earth terminals for alternator, control panel, enclosure and chassis shall be provided which shall be terminated at the earth pits with GI straps.
- The cables to be terminated with lugs and suitably protected against mechanical damage.

8.0 NOTES:

- Offered alternator should be of proven design / model. The model shall be in regular production range.
- Alternators, control / AMF panels and other electrical items must be new and in unused condition. No reconstructed / rebuilt item shall be acceptable.
- Bidder shall submit the following information along with the offer failing which offer is liable for rejection:
 - Frame size of the offered alternator
 - Detailed dimensional / GA drawings of the offered alternator, AMF panel
 - Electrical Schematic and Indicative power and control wiring diagram
 - Component layout diagram
 - Bill of Materials, catalogue and datasheets of all the components used
- OIL shall study the submitted drawings and incorporate modifications / corrections if required, which shall be conveyed to the bidder. The bidder shall incorporate the modifications / corrections in the revised drawings and submit the same to OIL for approval. Only after getting due approval of final revised drawings from OIL, the bidder / manufacturer shall proceed for manufacturing / assembly of the panels.
- After successful commissioning, supplier / bidder shall submit electrical drawings of the panels and all electrical power and control wiring diagram inside the skid which shall be corrected and final drawings after installation and commissioning, 6 (six) sets as hard copy. Also drawings shall be fixed on the panel door for each panel.

9.0 ACOUSTIC ENCLOSURE

- The engine and alternator are to be covered by acoustic enclosure. Acoustic enclosures shall be factory built and modular in construction with acoustically treated panels comprising of 50 mm thick glass wool, embedded in absorptive acoustic perforated panels / sheets.

- ii) Acoustic enclosure shall be designed to facilitate easy maintenance / repair of engine and alternator at worksite can be done.
- iii) The acoustic enclosure should be designed and manufactured to suit the most stringent noise specifications offering attenuation to a minimum of 75 dBA at 1 meter. Sound proofing of the enclosure should be done with high quality rock wool / mineral wool conforming to IS; 8183 of 50 mm thickness and density of 96 Kg / m³. The rock wool should be further covered with fiberglass cloth and perforated powder coated sheet.
- iv) The acoustic enclosure shall comply with the provisions of the Environment (Protection) Amendment Rules, issued by the Ministry of Environment & Forest, Government of India. It should further be approved by National Physical Laboratory, New Delhi or alternatively should meet norms specified by Central Pollution Control Board.
- v) Specially designed attenuators should be provided to control sound at air entry to and exit from the enclosure. There should be carefully designed inlet and outlet baffles / attenuators with corresponding weather louvers and bird mesh allowing sufficient air flow, for the set to operate even under the harshest ambient conditions whilst maintaining specified noise levels.
- vi) The enclosure should be fabricated out of CRCA sheet of 12 SWG Corrosion resistant sheet steel duly surface treated and lined with sound absorbing materials retained by powder coated perforated zinc sheet. The sheet metal components should be pretreated and to ensure prolonged life of the enclosure, it should be pure polyester based powder coated (inside as well as outside) and all nuts and bolts / hardware should be Zinc coated.
- vii) Readings of indicating meters must be visible from outside. The doors should be lined with high quality EPDM gaskets to avoid leakage of sound.
- viii) Cable glands should be provided to avoid necessity of cutting into the canopy.
- ix) The enclosure should have the sufficient space in and around the generating set to facilitate maintenance and operation of the set. There should also be provisions for taking out the generating set or the panel for maintenance / overhauling jobs.
- x) The residential type silencer and spark arrestor should be roof mounted with all internal pipe work including flexible bellows already connected. The silencer should be designed to give minimum back pressure and high sound attenuation.
- xi) The canopy should be finished in synthetic enamel paint incorporating rust inhibitors and aluminum sprayed silencers and spark arrestors to guarantee a superior and long lasting finish.
- xii) Adequate ventilation should be provided to meet air requirement for combustion and heat removal. If required, a thermostatically controlled blower should be provided to meet total air requirement and air changes. Temperature of enclosure should not exceed beyond 5 °C of ambient temp.
- xiii) There should be provision for filling the fuel from outside as in the case of automobiles with locking arrangement. There should also be provision of drain plugs for drawing lube oil and diesel. Also, the batteries should be accommodated in a separate tray within the enclosure.
- xiv) There should be provision of emergency shutdown of the engine from outside the enclosure.

- xv) There must be two numbers of earthing points on both sides for connecting the enclosure to the ground.
- xvi) The enclosure should be provided with internal wiring for illumination. There should be one number 15 amps MCB, one number switchboard with 5 amps / 15 amps combined switch / socket, 2 numbers 20 watt (min) energy efficient tube light fitting with lamp for inside illumination. Wiring of lighting circuit should through the PVC conduit.

10.0 INSPECTION & TESTING:

The generating sets including the AMF panel shall inspected and tested at manufacturers works / factory by OIL Engineer, as per relevant IS norms, prior to dispatch. Such inspection however shall not relieve the supplier of his responsibility to ensure that the equipment supplied is free from all manufacturing defects and conforms to correct specification. Intimation must be sent to OIL at least 10 days in advance for inspecting the generating sets at manufacturer's premises.

i) DIESEL ENGINE

Following tests shall be carried out at the bidder's works in the presence of OIL engineer(s).

DG set and the auxiliaries shall be assembled at the manufacturer's works and the following tests shall be performed.

- a) One (1) hour at full load with fuel consumption
- b) One (1) hour at 3 / 4 load with fuel consumption
- c) One (1) hour at 50% load with fuel consumption
- d) Four (4) hours at full load followed by a 1 hour continuous load at 110%.
- e) Engine starting time
- f) I.H.P. / B.H.P. test
- g) Noise / Vibration test

Before each test, the engine shall be brought to a steady state under the conditions of the test.

ii) The alternator shall be subjected to following routine tests:

- a) Measurement of resistance of stator and rotor windings.
- b) Insulation resistance of stator and rotor windings..
- c) High voltage tests on stator and rotor windings.
- d) Open circuit and short circuit tests.
- e) Temperature rise test.
- f) Regulation test.
- g) Efficiency test.
- h) Momentary overload test.
- i) Vibration and noise level measurement.

In addition to the above routine tests temperature rise test on generator shall be conducted.

iii) VOLTAGE REGULATOR

- a) Sensitivity test
- b) Response time test

iv) The supplier shall submit detailed records and all relevant test certificates along with the delivery of the generating sets. The certificates should be forwarded in quadruplicate and those for electrical equipment.

To and fro fares, boarding / lodging and other en route expenses of OIL's Inspection Engineers for carrying out inspection shall be borne by OIL. Dispatch clearance will not be given unless OIL is fully satisfied as regards manufacturing to order specifications and successful testing.

v) **TEST AT SITE:**

- a) The tests shall be performed after proper installation of the diesel generating unit at site to prove the proper operation of interlock circuits and the capability of the engine to start and pick-up load in the specified time, under supervision of the employer representative responsible for supervision, testing and commissioning.
- b) Guarantee tests to prove guaranteed performance of the DG set shall also be carried out at site after proper installation. The load test with available load at site will be given for about 36 hours.

11.0 TEST CERTIFICATE:

- a) 2 sets of test certificate shall be submitted.
- b) The test reports shall furnish complete identification of the data, including serial number of each equipment.

12.0 INSTALLATION & COMMISSIONING

Installation and Commissioning of the 125 KVA DG Sets and its AMF panel(s) shall be carried out by the successful bidder in the presence of OIL representatives at its fields at Dandewala GPC in Jaisalmer district of Rajasthan (India). Services of qualified and competent personnel from equipment manufacturer are essential during installation and commissioning of the generating sets. Persons engaged for installation, testing and commissioning of the generating sets should have valid electrical license. A person who is authorized for supervision of all electrical works shall have supervisory license.

Once commissioned at designated sites, the generating sets will be subjected to a trial run on available load for a minimum period of 36 hrs continuously and on satisfactory performance shall be subsequently handed over to OIL.

13.0 Price :

The bidder shall quote the price for:

- a) Cost of DG set complete as per specifications mentioned in the NIT (inclusive of all taxes / levies)
- b) Installation / commissioning charges at site (inclusive of all taxes / levies). These charges should include amongst others to and fro fares, boarding / lodging and other expenses of the commissioning engineers & all personnels related during commissioning at Dandewala GPC & income / service tax etc.

14.0 DOCUMENTATION :

2 Sets of the following documents / drawings should be supplied with the generating set :

- i) GA Drawing , O & M manual of diesel engine, alternator and AMF panel
- ii) Spare parts catalogue of diesel engine, alternator and AMF panel
- iii) Test certificate of diesel engine
- iv) Test certificate of alternator

- v) One set of drawing showing installation details of the generating set, wiring diagram for the control panel and wiring drawing between the alternator and control panel.

15.0 SPARE PARTS:

List of spares / Bill of Materials along with their cost and part numbers that shall be required for normal operation and maintenance of the generating sets and accessories for a period of two years should be submitted along with the offer. Spare parts should be available for minimum 10 years from the date of delivery of materials.

Spare parts list for alternator, control panel and light fittings etc. shall be submitted separately.

In addition, commissioning spares for the complete genset shall be offered along with the main offer. Cost of these shall be considered for evaluation of the tender. The items shall be handed over to OIL after commissioning, if unused.

The following items shall be offered as MANDATORY SPARES along with the alternator unit. Cost of these items shall be considered for evaluation of the tender.

- i) Automatic voltage regulator unit (along with any other component used with AVR)- 01 set
- ii) Standard (forward) diode for rotating rectifier assembly- 01 set.
- iii) Reverse diode for rotating rectifier assembly- 01 set.
- iv) Varistor / surge protector -03 nos.
- v) Lube oil filters : 4 sets
- vi) Fuel filters : 4 sets

Item wise break up of prices of these spares should also be provided.

16.0 GENERAL NOTES FOR ELECTRICAL ITEMS AND WORKS :

- i) Bidder to give an undertaking that their offer fully meets all the specifications mentioned in the tender document.
- ii) Bidders to mention specific deviations of their offer from tender specifications. However, deviations from tender specifications are subjected to acceptance by OIL.
- iii) Bidder must submit the undertakings from the manufacturers of generator and control panel stating that they have read and understood the complete specification and in the event of an order on the bidder the respective equipment supplied by them through the bidder will fully meet the tender specifications for rating and performance.
- iv) In the event of an order the bidder will prepare detailed wiring diagram, earthing scheme with drawing, detailed drawings for control panel along with as to be built dimensional drawing, layout plan of the unit showing all parts, power, control cable, earth strap routes, bill of materials. The drawing should clearly indicate the arrangements for protection of cables and earth straps against mechanical damage.
- v) Bidder should submit with the above documents the confirmation from alternator and control panel manufacturer that the offered alternator and control meets all the features mentioned in the order specifications.
- vi) Categorical confirmation against each point of alternator's and control panel's specification is required.
- vii) Suitable documentary evidence and catalogues shall be submitted. All the above mentioned drawing and documents will be submitted to OIL for approval within

one month after placement of order. The manufacture of the unit is to be started only after written approval of the drawings by OIL.

- viii) Four sets of complete electrical drawings and layout details and operation, maintenance manual of generator, catalogue of major component of control panel and guarantee certificate are required along with the supply.

17.0 WARRANTY:

The warranty period for the engine, alternator, control panels and all other accessories should be a minimum of 12 months from the date of commissioning or 18 months from the date of dispatch whichever is later. The relevant warranty certificate should be submitted at the time of delivery of the generating sets.

18.0 PACKING:

The packing shall be sufficiently robust to withstand rough handling / transit damage. Boxes / packing cases containing electrical equipment shall be water proof lined. Control panels and electrical items in particular should be packed with sufficient care (with shock / vibration proof lining) to prevent transit damage. Loose components shall be packed separately.

19.0 AFTER SALES SERVICE:

The nature of after sales service, which the supplier can provide during initial commissioning and also subsequently should be clearly stated. Confirmation that all spares related to the equipment supplied shall be available for a period of at least 10 years after delivery should be provided. Bidders should also indicate their nearest authorized service center.

20.0 BID REJECTION CRITERIA (BRC):

A. TECHNICAL

The bids must conform to the specifications and terms and conditions given in the enquiry. Bid shall be rejected or will be considered as non-responsive in case the items(s) offered do not conform to the following requirement.

- i) The offered engine should be water cooled, vertical in-line, four stroke, diesel engine having in-line fuel pump, mechanical / electronic governing system capable of developing horsepower not less than 158 BHP to drive an alternator of 125 KVA when running at 1500 rpm at site conditions.
- ii) The offered engine must be certified by agencies authorised by Central Pollution Control Board (CPCB) for type approval and conformity of Production tests for emission / noise level of engines as per latest amendments under the Environment (Protection) Act, 1986.
- iii) The acoustic enclosure for generating set must be designed and manufactured in compliance with Central Pollution Control Board (CPCB) norms and certified by agencies authorised by CPCB.
- iv) The alternator must be of brushless type and developing minimum 125 kVA.

B. OTHER THAN TECHNICAL

- i) Bidder should be an OEM or authorized dealer of engine, alternator or alternatively an OEM approved assembler of the complete Diesel-generating set or their authorized representative. Documentary evidence in this regard must be provided along with the quotation failing which their offer will be rejected.
- ii) If the bidder is an OEM of engine or their authorized dealer then they must purchase the alternator from OEM of alternator or their authorized dealer and vice versa and

necessary documentary certificates from the OEM must be submitted along with the offer failing which their offer will be rejected..

- iii) If the bidder is an OEM approved assembler of generating sets or their authorized representative, he must purchase the engine and the alternator from OEM or their authorized dealers. Documentary evidence in this regard must be enclosed with the offer failing which offer will be rejected.
- iv) Bidders should have the experience of successfully completing at least 8 (eight) orders in the last 3 (Three) years before the bid closing date of this enquiry against supply, installation, commissioning and testing of Diesel Engine driven generating sets of capacity 125 KVA or above along with the AMF Panels and accessories either in PSUs, Central Govt. or any other reputed Company. Documentary evidence in this regard must be provided along with the quotation failing which their offer will be rejected.
- v) The offered engine should be a four stroke, direct injection turbo charged, after cooled, diesel engine, rated for continuous power and capable of developing a net minimum BHP of 158 at 1500 rpm at site conditions

21.0 BID EVALUATION CRITERIA (BEC)

1.0 The bids conforming to the terms and conditions stipulated in the tender and considered to be responsive after subjecting to the Bid Rejection Criteria as well as verification of original of any or all documents/ documentary evidences pertaining to BRC, will be considered for further evaluation as per the Bid Evaluation Criteria.

2.0 For evaluation of bids, Supply, transportation, loading, unloading, erection, installation, testing and commissioning of two (02) nos. of DG Sets will be considered. Comparison of offers will be done on Total F.O.R Oil India Limited's Gas Processing Plant, (DND-GPC) at Dandewala near Tanot in Jaisalmer district (120 KMs approx. Distance from Jaisalmer Township) of Rajasthan basis as under:

- (A) Total Material Cost for 2 Nos of Gen sets
- (B) Packing and Forwarding Charges,
- (C) Total Ex-works value, (A + B) above
- (D) Excise Duty as applicable on (C) above (Please indicate applicable rate of Tax)
- (E) Sales Tax as applicable on (C + D) above (Please indicate applicable rate of Tax)
- (F) Total FOR Manufacturing station Value, (C + D +E) above
- (G) Road Transportation charges including loading and unloading of Gen Sets at DND-GPC
- (H) Insurance charges
- (I) Installation/Commissioning Charges including service tax
- (J) Inspection/Testing Charges, if any
- (K) Total value (F+ G + H+ I + J)

3.0 To evaluate the inter-se-ranking of the offers, Rajasthan Entry Tax on purchase value will be loaded as per prevailing Govt. of Rajasthan guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their offer.

4.0 Installation /Commissioning charges should be quoted separately which shall be considered for evaluation of offers. These charges should include amongst others to and fro fares, boarding /lodging and other expenses of the Commissioning Engineers during their stay in Rajasthan. All personnel, Income and Service Tax etc. towards the service provided by the supplier shall be borne by the supplier and will be deducted at source. Bidder should confirm about installation/commissioning in their Bid. Inspection/Testing charges, if any, shall be quoted separately which shall be considered for evaluation of offers.

5.0 If there is any discrepancy between the unit price and the total price, the unit price will prevail and the total price shall be corrected. Similarly, if there is any discrepancy between words and figure, the amount in words shall prevail and will be adopted for evaluation.

6.0 To ascertain the substantial responsiveness of the bid, OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in total must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

22.0 STANDARD NOTES:

1.0 Materials to be supplied hereunder shall be new, unused, of recent make, of best quality & workmanship and shall be guaranteed by the seller against defects arising from faulty materials, workmanship or design. Defective goods / materials or parts notified by OIL to the seller shall be replaced immediately by the supplier at the supplier's expense at no extra cost to OIL.

2.0 Bidders are to quote for Unit Material value, Packing/Forwarding Charges, Taxes & Duties as applicable, Transportation, loading, unloading, erection, installation, testing and commissioning charges upto Oil India Limited's Gas Processing Plant, DND-GPC at Dandewala near Tanot in Jaisalmer district ((120 KMs approx. Distance from Jaisalmer Township) of Rajasthan, Insurance Charges, Payment Terms, **Best Delivery Period**, Net. & Gross Weight etc. in their offer.

3.0 For order with F.O.R. Destination term, 100% payment against dispatch document will not be entertained. In this regards please refer payment terms in ANNEXURE - MM/RP/GLOBAL/E-01/2005. Bidders are advised to take note of this while mentioning payment term.

4.0 In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have submitted the bids on or before the original B.C. date shall not be permitted to revise their quotation.

5.0 The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.

6.0 Other terms and conditions of the enquiry shall be as per General Terms and Conditions for Global E-Tender vide MM/RP/GLOBAL/E-01/2005. However, if any of the Clauses of this tender document contradict the Clauses of the booklet MM/RP/GLOBAL/E-01/2005 elsewhere, those in this tender document shall prevail.

ANNEXURE - I

TECHNICAL CHECK LIST:

The following check list must be completed and returned with the offer. Please ensure that all these points are covered in your offer. These will ensure that your offer is properly evaluated. Please tick mark Yes or No. to the following question, in the right hand column.

Sl. No.	Item	YES/NO
1	WHETHER QUOTED AS OEM OF ENGINE AND WHETHER DOCUMENTARY EVIDENCES SUBMITTED?	
2	WHETHER QUOTED AS OEM OF ALTERNATOR AND WHETHER DOCUMENTARY EVIDENCES SUBMITTED?	
3	WHETHER QUOTED AS AUTHORISED DEALER OF OEM (ENGINE/ ALTERNATOR) AND WHETHER DOCUMENTARY EVIDENCES SUBMITTED?	
4	WHETHER QUOTED AS OEM APPROVED ASSEMBLER?	
5	WHETHER SEPARATELY HIGHLIGHTED ANY DEVIATION FROM THE TECHNICAL SPECIFICATION?	
6	WHETHER DETAILED SPECIFICATIONS OF ENGINE, ALTERNATOR WITH MANUFACTURER'S TECHNICAL LITERATURE / CATALOGUE ENCLOSED WITH THE OFFER?	
7	WHETHER TYPE APPROVAL AND CONFORMITY OF PRODUCTION TESTS CERTIFICATE OF ENGINE PROVIDED ALONG WITH THE OFFER?	
8	WHETHER TEST CERTIFICATE OF ALTERNATOR & CONTROL PANEL WILL BE SUBMITTED ALONGWITH THE SUPPLY ?	
9	WHETHER SPARE PARTS FOR 10 YEARS SHALL BE AVAILABLE?	
10	WHETHER INDICATIVE POWER AND WIRING DIAGRAM OF ALTERNATOR, CONTROL PANEL SUBMITTED?	
11	WHETHER GENERAL ASSEMBLY DRAWING OF CONTROL PANEL SUBMITTED?	
12	WHETHER IT IS CONFIRMED THAT CONTROL PANEL DRAWING SHALL BE APPROVED BY OIL BEFORE MANUFACTURING IN THE EVENT OF PLACEMENT OF ORDER?	
13	WHETHER ENGINE OFFERED IS RATED FOR CONTINUOUS DUTY?	
14	WHETHER THE ENGINE IS WATER COOLED, VERTICAL IN-LINE FOUR STROKE, DIESEL ENGINE HAVING IN LINE FUEL PUMP AND GOVERNOR	
15	WHETHER THE NOISE ATTENUATION SHALL BE MAXIMUM OF 75dBA ONE METER FROM ACOUSTIC ENCLOSURE WHEN THE GENERATING SET IN THE OPERATION?	
16	WHETHER THE OFFERED ENGINE CONFORM EITHER TO ISO3046 /IS 10002 SPECIFICATION	
17	WHETHER THE ENGINE IS OF REPUTED MAKE MANUFACTURED IN INDIA?	
18	WHETHER THE DOCUMENTARY EVIDENCE SUBMITTED BY THE BIDDER OR THEIR OEM FOR SUPPLYING 8 NOS OF SUCH ENGINES FOR ANY APPLICATION WITHIN LAST 3 YEARS	

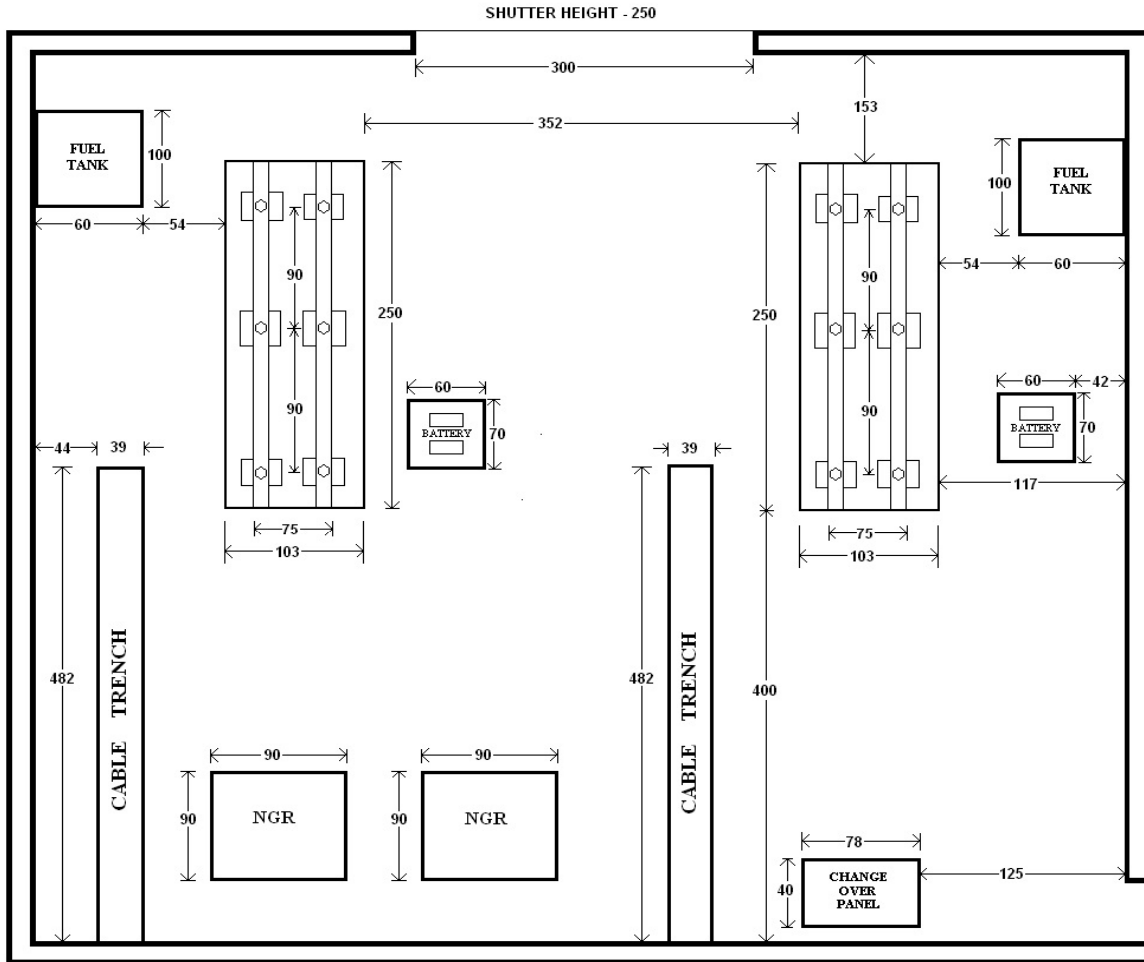
19	WHETHER THE BIDDER CONFIRM THAT THE MANDATORY SPARES FOR BOTH ENGINE AND ALTERNATOR WILL BE SUPPLIRD ALOGWITH THE ITEM	
20	WHETHER GENERAL ASSEMBLY DRAWING OF GENERATING SET SUBMITTED?	
21	WHETHER THE BIDDER HAVE SUBMITTED TECHNICAL CHECK LIST ALONWITH THEIR OFFER	

ANNEXURE - II

TOOL KIT CONSISTS OF FOLLOWING TOOLS WITH TOOL BOX SHALL HAVE TO BE SUPPLIED :

Sl. No.	Item	YES/NO
1	OPEN JAW DOUBLE ENDED SPANER IN MM SIZES: 6 X 7 , 8 X 9 , 10 X 11, 12 X 13 , 14 X 15 , 16 X 17 , 18 X 19 , 20 X 22 , 21 X 23 , 24 X 26 , 25 X 27 , 28 X 30 , 30 X 32 (TOTAL13 NOS) MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
2	DOUBLE ENDED RING SPANNER IN MM SIZES: 6 X 7 , 8 X 9 , 10 X 11, 12 X 13 , 14 X15 , 16 X 17 , 18 X 19 , 20 X 22 , 21 X 23 , 24 X 26 , 25 X 27 , 28 X 30 , 30 X 32 (TOTAL 13NOS) MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
3	HEAVY DUTY DOUBLE HEX. STD. SOCKETS IN 1/2"SQ. DRIVE IN MM SIZES:8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29, 30,31,32 & 34 (26 NOS) MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
4	REVERSIBLE RATCHET IN 1/2"SQ.DRIVE, OVERALL LENGTH: 260 MM. universal socket 3/8",1/2",9/16" MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
5	SLIDING T-HANDLE IN 1/2"SQ.DRIVE, OVERALL LENGTH: 300 MM. MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
6	EXTENSION BAR IN 1/2"SQ.DRIVE ,OVERALL LENGTH :300 MM. MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
7	L-HANDLE IN 1/2"SQ.DRIVE ,OVERALL LENGTH :210 MM. MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
8	SCREW DRIVER ENGINEER PATTERN: 200 X 10 MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
9	ADJUSTABLE WRENCH:12" MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
10	ALLEN KEY SET 1.5 MM TO 10 MM MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
11	COMBINATION PLIER: 6" MAKE: GRIPHOLD/MEKASTER/TAPARIA/EVEREST/TAPARIA	
12	LONG NOSE PLIER :160 MM MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
13	BALL PIEN HAMMER: 200 GMS MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
14	FEELEER GAUGE-300 MM (26 BLADES) INCH AND MM COMBINED MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
15	MEASURING TAPE : 3 MTS (METALLIC) MAKE:FREEMAN	
16	OUTSIDE CALIPER 6" MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	
17	INSIDE CALIPER 6" MAKE: GRIPHOLD/MEKASTER/STANLEY/TAPARIA	

ANNEXURE ñ III



ROOM SIZE:
800 X 800 X 360

NOTE: 1. ALL THE MEASUREMENTS ARE IN CENTIMETER.
2. FUEL TANK, NGR, BATTERY ARE MOVABLE.

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